

# METHYL TERTIARY BUTYL ETHER

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** METHYL TERTIARY BUTYL ETHER

**Number:** 000000000000499180

**Internal ID:** 354

**Chemical characterization:** Alkyl ethers

**CAS-No.:** 1634-04-4

**Chemical Name:** t-Butyl Methyl Ether

**Synonyms:** Methyl t-Butyl Ether (MTBE), Tert-Butyl Methyl Ether, MTBE

**Company Address**

Lyondell Chemical Company  
One Houston Center, Suite 700  
1221 McKinney St.  
P.O. Box 2583  
Houston Texas 77252-2583

**Company Telephone**

Customer Service 888 777-0232  
Product Safety 800 700-0946  
product.safety@lyondellbasell.com

**Emergency telephone**

CHEMTREC USA 800-424-9300  
LYONDELL 800-245-4532

## 2. HAZARDS IDENTIFICATION

### *Emergency Overview*

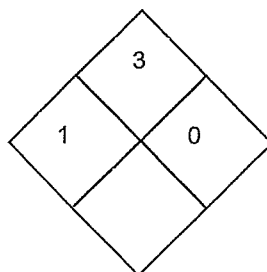
**Signal Word**

DANGER.

**Hazards**

Extremely flammable liquid. Eye irritant. Skin irritant. Not expected to be a skin absorption hazard. Not expected to be a sensitizer. Mucous membrane irritant. Inhalation hazard. Aspiration hazard. CNS depressant. Unpleasant terpentine-like taste in water.

NFPA®



HMIS®

|                 |   |
|-----------------|---|
| Health          | 1 |
| Flammability    | 3 |
| Physical Hazard | 0 |

**Physical state**

liquid

**Color**

clear colorless

**Odor**

**METHYL TERTIARY BUTYL ETHER****Odor**

Turpentine-like odor.

**Odor Threshold**

0.053 ppm / Odor is not an adequate warning of potentially hazardous ambient air concentrations. Some individuals find the odor of MTBE objectionable (threshold for detection in air approx. 0.0002 mg/l; 0.053 ppm). Multiple studies suggest that approximately 15ug/l of MTBE is the appropriate concentration to use as an odor threshold in water. The only study suggesting any lower threshold is a single research study concluding that the odor threshold of MTBE in water was less than 1ug/l (Campden, 1993). The results of that single study could not be replicated, even by the original laboratory. Given both the anomaly of the Campden study result and the fact that it could not be replicated, Lyondell does not consider it to provide a valid basis for setting an odor threshold level for MTBE in water.

**Potential health effects****Acute effects**

See component summary.

- *t-Butyl Methyl Ether* 1634-04-4

Eye irritant. Moderate skin irritant. Not a skin absorption hazard. Mucous membrane irritant. Overexposure may produce anesthetic or narcotic effects. Aspiration hazard.

**Skin**

May cause moderate skin irritation. Not expected to be a skin absorption hazard. Not expected to be a sensitizer.

**Inhalation**

Vapors may cause irritation of the eyes, nose and throat as well as CNS depression (fatigue, dizziness, loss of concentration, with collapse, coma and death possible in cases of severe overexposure). High vapor concentrations may be irritating to the upper respiratory tract.

**Eyes**

Contact with the eyes may cause irritation consisting of reversible redness, swelling and mucous discharge to the conjunctiva.

**Ingestion**

Ingestion may cause discomfort and irritation of the gastrointestinal tract and CNS depression (fatigue, dizziness, collapse, coma and death).

**Chronic effects**

See component summary.

- *t-Butyl Methyl Ether* 1634-04-4

Prolonged exposure may produce anesthetic and narcotic effects. Repeated or prolonged contact with skin may cause defatting and drying of the skin which may result in dermatitis. Chronic animal toxicity studies exposing rats and mice to MTBE have been performed. A description of these studies and an assessment of their results is presented elsewhere in this document. See chapter 11. Toxicological information

**Aggravated Medical Condition**

Medical information regarding special health effects is not conclusive. This material may aggravate pulmonary/bronchial disease and/or cause breathing difficulty.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| <u>Component</u>     | <u>CAS-No.</u> | <u>EC-No.</u> | <u>Weight %</u> |
|----------------------|----------------|---------------|-----------------|
| t-Butyl Methyl Ether | 1634-04-4      | 216-653-1     | >= 97.0         |

# METHYL TERTIARY BUTYL ETHER

Typical composition

## 4. FIRST AID MEASURES

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### General advice

Always observe self-protection methods. Move out of dangerous area. Remove contaminated shoes and clothing. Consult a physician. Show this material safety data sheet to the doctor in attendance. Aspiration into the lungs during swallowing or vomiting can cause lung damage, possibly leading to chronic lung dysfunction or death.

### Skin

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not leave the victim unattended. Keep patient warm and at rest. Get immediate medical advice/ attention. If breathing is difficult, give oxygen. If unconscious place in recovery position and seek medical advice. If breathing has stopped, apply artificial respiration.

### Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention, preferably an ophthalmologist.

### Ingestion

Rinse mouth with water. If conscious, drink plenty of water. Do NOT induce vomiting. Aspiration may cause lung damage. If vomiting does occur, have victim lean forward to reduce risk of aspiration. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Get immediate medical advice/ attention.

### Notes to physician

There is no specific antidote. Do not induce vomiting. However, if vomiting occurs spontaneously, maintain open airway. Gastrointestinal decontamination in accidental petroleum distillate ingestions is not recommended, because of the severe aspiration hazard. All contaminated clothing should be removed, and contaminated skin areas washed with lipophilic soap, or green soap, and water. Gastric lavage is indicated in those patients who require decontamination. Be sure that an endotracheal tube is in place prior to lavage; use cuffed tubes in patients over 7 years of age. Although activated charcoal does not bind petroleum distillate products and may induce vomiting, charcoal may be administered when the physician feels the charcoal may absorb a toxic additive. A chest x-ray should be taken immediately after stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

## 5. FIRE-FIGHTING MEASURES

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### Flammable properties

#### Classification

OSHA/NFPA Class IB Flammable Liquid.

#### Flash point

~ -28 °C (-18.4 °F) (SETA)

#### Autoignition temperature

~ 460 °C (860 °F)

#### Lower explosion limit

~ 2.5 vol%

**METHYL TERTIARY BUTYL ETHER**

**Upper explosion limit**  
~ 15.1 vol%

**Extinguishing Media****Suitable extinguishing media**

SMALL FIRE: Use dry chemicals, CO<sub>2</sub>, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

**Unsuitable extinguishing media**

Do not use solid water stream/may spread fire.

**Protective equipment and precautions for firefighters****Protective equipment and precautions for firefighters**

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

**Precautions for fire-fighting**

Releases flammable vapors below normal ambient temperatures. Flammable vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not use straight streams. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**Hazardous combustion products**

Thermal decomposition may produce carbon monoxide and other toxic vapors.

**6. ACCIDENTAL RELEASE MEASURES**

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**Spills and leaks**

Highly flammable liquid. Release can cause fire or explosion. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. Water spray may reduce vapor; but may not prevent ignition in closed spaces. Dike large spills and place materials in salvage containers.

MTBE is highly volatile, partially water soluble and has only a minimal tendency to adhere to soil particles. Even small volumes can pose a threat to the environment and nearby water resources. Surface spills can reach groundwater through porous soil or cracked surfaces. All efforts should be made to prevent any leaks or spills, and to protect water resources. Where spills are possible, a comprehensive spill response plan should be developed and implemented. If a leak or spill reaches the groundwater, the groundwater may become contaminated. If the groundwater is a source of drinking water, the associated drinking water well(s) could become contaminated. MTBE can impart an unpleasant taste and odor to water at very low concentrations.

**7. HANDLING AND STORAGE**

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**Handling**

Keep container tightly closed when not in use. Extinguish all ignition sources. Wear recommended personal protective equipment. Containers must be properly grounded before beginning transfer. All electrical equipment should be grounded and conform to applicable electric codes and regulatory requirements. Check atmosphere for explosiveness and oxygen deficiencies. Ensure adequate ventilation, especially in confined areas. Observe precautions pertaining to confined space entry. Use only non-sparking tools. Carefully vent any internal pressure before removing closure. Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair. Handle empty containers with care; vapor/residue may be

**METHYL TERTIARY BUTYL ETHER****Handling**

flammable. Avoid contact with incompatible agents. Keep away from heat and sources of ignition. Use special care to avoid static electric charges.

**Storage**

Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents. Soft steel; avoid most plastics, Viton and Fluorel. Store closed drums with bung in up position. Vapor space above stored liquid may be flammable/explosive unless blanketed with inert gas. Electrical installations / working materials must comply with the technological safety standards. No smoking. Do not puncture or incinerate containers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering Controls**

Provide local exhaust or general room ventilation to minimize dust and/or vapor concentrations. Electrical equipment should be grounded and conform to applicable electrical code.

**Personal protective equipment**Inhalation

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Skin

Wear chemical resistant gloves such as: 4H(tm)(PE/EVAL). Choose body protection according to the amount and concentration of the dangerous substance at the work place. Use PPE that is chemical resistant to the product and prevents skin contact. Fire retardant clothing is appropriate for routine occupational use.

Eyes

Wear safety glasses as minimum eye protection. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

**Remarks**

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Take off contaminated clothing and wash before reuse. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Occupational Exposure Limits**

| Component            | Source     | Type: | Value  | Note  |
|----------------------|------------|-------|--------|-------|
| t-Butyl Methyl Ether | US (ACGIH) | TWA   | 50 ppm | None. |

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** liquid clear, colorless

## METHYL TERTIARY BUTYL ETHER

**Odor:** Turpentine-like odor.

**Odor Threshold:** 0.053 ppm Odor is not an adequate warning of potentially hazardous ambient air concentrations. Some individuals find the odor of MTBE objectionable (threshold for detection in air approx. 0.0002 mg/l; 0.053 ppm). Multiple studies suggest that approximately 15ug/l of MTBE is the appropriate concentration to use as an odor threshold in water. The only study suggesting any lower threshold is a single research study concluding that the odor threshold of MTBE in water was less than 1ug/l (Campden, 1993). The results of that single study could not be replicated, even by the original laboratory. Given both the anomaly of the Campden study result and the fact that it could not be replicated, Lyondell does not consider it to provide a valid basis for setting an odor threshold level for MTBE in water.

**pH:** Not applicable.

**Boiling point/boiling range:** ~ 55 °C (131 °F) @ 760 mm Hg

**Melting/freezing point:** -109 °C (-164.2 °F)

**Flash point:** ~ -28 °C (-18.4 °F) (SETA)

**Autoignition temperature:** ~ 460 °C (860 °F)

**Flammability:** OSHA/NFPA Class IB Flammable Liquid.

**Lower explosion limit:** ~ 2.5 vol%

**Upper explosion limit:** ~ 15.1 vol%

**Explosive properties:** Not explosive

**Oxidizing properties:** The substance or mixture is not classified as oxidizing.

**Vapor pressure:** ~ 33 kPa / 245 mm Hg @ 25 °C (77 °F)

**Evaporation rate:** No Data Available.

**Relative density:** ~ 0.74 @ 20 °C (68 °F) (Water = 1.0 at 4°C (39.2°F))

**Relative vapor density:** ~ 3 @ 20 °C (68 °F)(Air = 1.0)

**Viscosity:** ~ 0.3 mPa.s @ 25 °C (77 °F)  
0.464 mm<sup>2</sup>/s @ 20 °C (68 °F)

**Water solubility:** 41.850 g/l @ 20 °C (68 °F)

**Partition coefficient: n-octanol/water:** @ 20 °C (68 °F)

**Other physico-chemical properties:** Additional properties may be listed in Sections 2 and 5.

## 10. STABILITY AND REACTIVITY

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### Conditions to avoid

Heat, sparks, open flame, other ignition sources, and oxidizing conditions.

### Materials to avoid

Contact with strong acids can decompose this material and generate extremely flammable isobutylene. Strong oxidizing agents. May accumulate static electrical charges, and may cause ignition of the vapors

### Hazardous polymerization

**METHYL TERTIARY BUTYL ETHER****Hazardous polymerization**

Not expected to occur.

**Reactions with Air and Water**

May react with oxygen to form peroxides.

**11. TOXICOLOGICAL INFORMATION**

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**Product information**

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**Product Summary**

MTBE is of slight acute toxicity, although inhalation exposure to high concentrations may cause dizziness, CNS depression, loss of consciousness and irritation to the eye and upper respiratory tract. Some individuals find the odor of MTBE objectionable. Skin contact with undiluted product may lead to moderate irritation, while repeated exposure can cause cracking due to defatting of the dermis. It is not a skin sensitizer. Neat liquid MTBE may cause mild, reversible eye irritation. Liver enlargement, without evidence of structural organ damage, is commonly seen in rats and mice after repeated exposure, while male rats exhibit a sex- and species-specific accumulation of protein droplets in proximal tubules of the kidney. Changes in estrogen-sensitive tissues were reported in female mice exposed to high concentrations of MTBE vapor, however serum estrogen levels and estrogen receptor functions were unaffected. MTBE has no adverse effect on reproduction and is not selectively toxic to the fetus. Although formaldehyde is a possible metabolite that may be formed in simple in vitro systems, results from in vivo genotoxicity tests are consistently negative. Long term inhalation exposure to very high doses was associated with an increased incidence of liver tumors in female mice and kidney- and testis tumors in male rats.

**COMPONENT INFORMATION**

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- *t*-Butyl Methyl Ether 1634-04-4

**Acute toxicity**

|                    |     |         |         |
|--------------------|-----|---------|---------|
| <u>LC50 (Inhl)</u> | rat | 85 MG/L | 4 HOURS |
|--------------------|-----|---------|---------|

|                  |     |                  |
|------------------|-----|------------------|
| <u>LD50 Oral</u> | rat | > 2000 MG/KG BWT |
|------------------|-----|------------------|

|                    |     |                 |
|--------------------|-----|-----------------|
| <u>LD50 (Skin)</u> | rat | > 2000 MG/K BWT |
|--------------------|-----|-----------------|

**Acute effects**Inhalation

Vapors may cause irritation of the eyes, nose and throat as well as CNS depression (fatigue, dizziness, loss of concentration, with collapse, coma and death possible in cases of severe overexposure). High vapor concentrations may be irritating to the upper respiratory tract.

Ingestion

Ingestion of high doses may cause discomfort and irritation of the gastrointestinal tract and CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

Skin contact

Prolonged or repeated contact may cause skin to become dry or cracked.

**Irritation**Skin

Neat liquid is moderately irritating to skin.

Eyes

**METHYL TERTIARY BUTYL ETHER**

Neat liquid may produce minimal, reversible eye irritation.

**Sensitization**

Did not cause sensitization on laboratory animals.

**Target Organs**

Skin. Eye. Respiratory system. CNS depressant.

**Repeated dose toxicity**

No evidence of adverse systemic effects was seen in rodents exposed repeatedly to low concentrations of MTBE vapor, however higher exposures were associated with an accumulation of protein droplets in the kidney of male rats (a male rat-specific response), with liver enlargement (but no adverse histopathological lesions) in rats and mice of both sexes. A decreased incidence of cystic endometrial hyperplasia and changes in other estrogen-sensitive tissues were reported in female mice exposed to 28.6 mg/l (8,000 ppm) MTBE vapor, however serum estrogen levels and estrogen receptor functions were unaffected. There are inconsistent reports of minor subjective neurological symptoms in humans regularly exposed to low levels of MTBE vapor. It is unclear, however, if these are causally-related to MTBE or where triggered by its odor. Some individuals find the odor of MTBE objectionable (threshold for detection 0.0002 mg/l; 0.053 ppm).

**Reproductive effects**

No adverse effect on reproductive function or gonad histopathology seen in male and female rats exposed to 28.6 mg/l (8,000 ppm) MTBE vapor over two generations.

**Developmental Toxicity**

MTBE is not selectively toxic to the fetus. No adverse developmental effects were reported in rabbits exposed to high concentrations during pregnancy, despite the occurrence of maternal toxicity (CNS effects, significantly lower food intake, significantly lower maternal body weight). Similar maternal signs were noted in mice exposed under similar conditions, however in this instance an increased incidence of cleft palate was apparent in the offspring. Cleft palate is a stress-related phenomenon in the mouse hence this observation was considered secondary to maternal toxicity in this species.

**Genetic Toxicity**

MTBE has been tested extensively for genotoxic activity in a range of in vitro and in vivo tests. While the majority of results are negative, weak positive findings (consistent with the metabolism of MTBE to formaldehyde by S9 fraction in vitro) have been obtained with Salmonella typhimurium TA102 and L5178Y TK+/- mouse lymphoma cells. The findings in Salmonella typhimurium strain TA 102, however, have not been replicated. Also consistently negative results have been obtained from in vivo tests, indicating that formation of free formaldehyde in the body is negligible. Overall, the weight of evidence indicates that MTBE is not a genotoxin.

**Carcinogenicity**

Long term toxicity studies conducted on rats and mice have found tumors to occur in the kidneys and testes of male rats and livers of mice at high exposure concentrations ( $\geq 3000$  ppm) after inhalation exposure. There is no evidence of a direct genotoxic mode of action involved in the tumor development and the treatment relation of the observed tumors is equivocal in some cases, and other tumor types are of no, or questionable, relevance to humans.

**12. ECOLOGICAL INFORMATION**

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**Product information**

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**Ecotoxicity**

This material is expected to be non-hazardous to aquatic species. See component summary.

**Environmental fate and pathways**

See component summary.

**COMPONENT INFORMATION**

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## METHYL TERTIARY BUTYL ETHER

- *t-Butyl Methyl Ether* 1634-04-4

### Ecotoxicity

#### Acute Fish toxicity

LC50 / 96 HOURS *Pimephales promelas* (fathead minnow) 672 mg/l

LC50 / 96 HOUR *Menidia beryllina* (Inland silverside) 574 mg/l

#### Acute toxicity to aquatic invertebrates

EC50 / 48 HOUR *Daphnia magna* (Water flea) 472 mg/l

EC50 / 48 HOUR *Americamysis bahia* (formerly *Mysidopsis bahia*) 187 mg/l

#### Toxicity to aquatic plants

EC50 / 96 HOUR *Pseudokirchneriella subcapita* (formerly *Selenastrum capricornutum*) 491 mg/l

NOEC / 96 HOURS *Pseudokirchneriella subcapita* (formerly *Selenastrum capricornutum*) 103 mg/l

#### Toxicity to microorganisms

NOEC / 18 HOURS *Pseudomonas putida* 710 mg/l

#### Chronic toxicity to fish

NOEC / 31 DAY *Pimephales promelas* (fathead minnow) 299 mg/l

#### Chronic toxicity to aquatic invertebrates

NOEC / 21 d *Daphnia magna* (Water flea) 51 mg/l

NOEC / 28 d *Americamysis bahia* (formerly *Mysidopsis bahia*) 26 mg/l

### Environmental fate and pathways

MTBE presents a potential concern to groundwater supplies. If released to the environment, relatively small amounts of MTBE may impart an unpleasant and distasteful odor and taste to groundwater which can render such groundwater unsuitable for consumption. Therefore, care should be used when handling, storing or transferring MTBE or gasoline blended with MTBE to insure that such product is not released into the environment and is not allowed to migrate to groundwater. Because of its solubility in water (4.3%) and relatively low organic carbon partitioning coefficient ( $K_{oc}=9.1$ ), MTBE is mobile in soil and, accordingly, every release into the environment has the potential for damaging groundwater supplies. Once in the groundwater, MTBE may migrate faster and farther than most other hydrocarbons and may be present at the leading edge of a groundwater contaminant plume. MTBE may not biodegrade as promptly as other gasoline constituents and may require additional and more costly remediation procedures. Other information regarding MTBE is available through the Chemical Abstracts Service, American Petroleum Institute publications, the U.S. Environmental Protection Agency and elsewhere.

#### Mobility

Behavior in environmental compartments: Level I fugacity modelling shows that 93.9% of MTBE partitions to the atmosphere.

#### Persistence and degradability

Biodegradation: Inherently biodegradable.

Bioaccumulation: Does not bioaccumulate.

#### Other adverse effects

As a VOC, MTBE can contribute to the formation of photochemical smog in the presence of other VOC's.

### 13. DISPOSAL CONSIDERATIONS

**METHYL TERTIARY BUTYL ETHER**

Contaminated products/soil/water may be Resource Conservation and Recovery Act (RCRA)hazardous waste/Occupational Safety and Health Administration (OSHA) hazardous material due to low flash point (see 40 Code of Federal Regulations (CFR) 261 and 29 CFR 1910). Assure effluent complies with applicable regulations. Landfill solids at permitted sites. Use registered transporters. Burn concentrated liquids in systems designed for low flash point material. Avoid flame-outs. Assure emissions comply with applicable regulations. Avoid overloading/poisoning plant biomass. Dilute aqueous waste may biodegrade.

**14. TRANSPORT INFORMATION****Special Provisions**

If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

**Proper shipping name** Methyl tert-butyl ether

**Reportable quantity** Methyl tert-butyl ether

**ID No.** UN2398

**Hazard class** 3

**Packing group** II

**15. REGULATORY INFORMATION****Notification status**

All ingredients are on the following inventories or are exempted from listing

| Country                  | Notification |
|--------------------------|--------------|
| Australia                | AICS         |
| Canada                   | DSL          |
| China                    | IECS         |
| European Union           | EINECS       |
| Japan                    | ENCS/ISHL    |
| Korea                    | ECL          |
| Philippines              | PICCS        |
| United States of America | TSCA         |

Contact [product.safety@lyondellbasell.com](mailto:product.safety@lyondellbasell.com) for additional global inventory information.

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

**SARA 302/304**

Component  
t-Butyl Methyl Ether

TPQ

RQ  
1000 lbs

**SARA 311/312**

Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312:

Fire Hazard.

Immediate (Acute) Health Hazard.

**SARA 313**

## METHYL TERTIARY BUTYL ETHER

This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

| <u>Component</u>     | <u>Reporting Threshold</u> |
|----------------------|----------------------------|
| t-Butyl Methyl Ether | 1.0%                       |

### State Reporting

This product contains no known chemicals regulated by California's Proposition 65.

This product contains the following chemicals regulated by New Jersey's Worker and Community Right to Know Act:  
1634-04-4 t-Butyl Methyl Ether

This product contains the following chemicals regulated by Massachusetts' Right to Know Law:  
1634-04-4 t-Butyl Methyl Ether

This product contains the following chemicals regulated by Pennsylvania's Right to Know Act:  
1634-04-4 t-Butyl Methyl Ether

## 16. OTHER INFORMATION

### Material safety datasheet sections which have been updated:

Last revision: Logo change. November 3 2010

### Disclaimer

This document is generated for the purpose of distributing health, safety, and environmental data. Information is correct to the best of our knowledge at the date of the MSDS publication. It is not a specification sheet nor should any displayed data be construed as a specification. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

### Product Information

Further environmental, safety, use and handling information pertaining to this product is available within Lyondell's "MTBE Product Safety Bulletin", which can be obtained from Lyondell Chemical Company.

### Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

### Language Translations

This document may be available in languages other than English.

End of Material Safety Data Sheet

